

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 9, 25, 28, 30, 32, 33 40-43 and 45 and add new claims 46-55, as shown below. A complete listing of the claims, including their current status, is set forth below.

1. **(Currently amended)** A method of using an addressable array of biopolymers on a substrate, comprising:

- (a) receiving ~~an the addressable~~ array of addressable biopolymer regions and an associated machine readable identifier carried on an array substrate or array housing;
- (b) exposing the array to a sample;
- (c) reading the array;
- (d) machine reading the identifier as an identifier signal; and
- (e) retrieving updated biological function data for one or more of the biopolymers from a memory based on the identifier signal, wherein the retrieved biological function data comprises information on the function of a target of the array, or its complement, or the gene from which either originated;

wherein the retrieval of the biological function data includes: communicating the identifier signal to a processor which retrieves data on the identity of the biopolymers based on the read identifier; and communicating the identity data on the biopolymers to a processor which retrieves the biological function data for one or more of the biopolymers from a memory based on the retrieved identity data.

2. **(Original)** A method according to claim 1 wherein the biopolymers are polynucleotides.

3. **(Original)** A method according to claim 2 wherein the biopolymers are DNA.

4. **(Cancelled)**

5. **(Original)** A method according to claim 1 wherein the memory from which biological function data is retrieved is a portable storage medium received from a remote location.

6. **(Previously presented)** A method according to claim 1 additionally

comprising associating information obtained from reading the array with the retrieved biological function data.

7. **(Previously presented)** A method according to claim 1 wherein the processor which retrieves the biological function data and the memory from which the biological function data is retrieved, are remote from the location at which the array and identifier are read, and wherein the read identifier or identity data is communicated to the remote processor.

8. **(Original)** A method according to claim 5 wherein the machine readable identifier is read while the array is in a same apparatus which reads the array.

9. **(Currently amended)** A method of using an addressable array of biopolymers on a substrate, comprising:

(a) receiving the ~~an~~ addressable array of addressable biopolymer regions and an associated machine readable identifier carried on an array substrate or array housing;

(b) exposing the array to a sample;

(c) reading the array;

(d) machine reading the identifier as an identifier signal; and

(e) communicating with a remote station and retrieving therefrom updated biological function data for one or more of the biopolymers based on the identifier signal, wherein the retrieved biological function data comprises information on the function of a target of the array, or its complement, or the gene from which either ~~originated~~ originated,

wherein the retrieval of the biological function data includes: communicating the identifier signal to a processor which retrieves data on the identity of the biopolymers based on the read identifier; and communicating the identity data on the biopolymers to a processor which retrieves the biological function data for one or more of the biopolymers from a memory based on the retrieved identity data.

10. **(Previously presented)** A method according to claim 9 wherein the biological function data is retrieved by communicating to the remote station the identifier signal, or communicating to the remote station a biopolymer identity obtained

using the identifier signal, and receiving the biological function data in response.

11. **(Original)** A method according to claim 10 additionally comprising:
obtaining a communication address of the remote station using the identifier signal;
wherein the communication address is used to establish communication with the remote station.

12. **(Cancelled)**

13. **(Original)** A method according to claim 10 additionally comprising
retrieving the biopolymer identity data from a memory carrying multiple identifiers in
association with the biopolymer identity data, using the identifier signal, and wherein
the biopolymer identity data is communicated to the remote station to retrieve the
biological function data in response.

14-24 **(Cancelled)**

25. **(Currently amended)** An apparatus for using an addressable array of
biopolymers on a substrate, comprising:

(a) an array reader which reads the an array of addressable biopolymer regions
following exposure to a sample;

(b) a reader which reads an identifier carried on an array substrate or an array
housing, as an identifier signal; and

(c) a processor which retrieves updated biological function data for one or more
of the biopolymers from a memory based on the read identifier signal, wherein the
retrieved biological function data comprises information on the function of a target of
the array, or its complement, or the gene from which either originated,

wherein the retrieval of the biological function data by the processor unit
includes: retrieving data on the identity of the biopolymers based on the read identifier;
and retrieving the biological function data for one or more of the biopolymers from a
memory based on the retrieved identity data.

26. **(Cancelled)**

27. **(Original)** An apparatus according to claim 25 additionally comprising a portable storage medium reader, and wherein the memory from which the processor retrieves the biological function data is a portable storage medium in the reader.

28. **(Currently amended)** An apparatus for using an addressable array of biopolymers on a substrate, comprising:

(a) an array reader which reads ~~the~~ an array of addressable biopolymer regions following exposure to a sample;

(b) a reader which reads an identifier carried on an array substrate or an array housing, as an identifier signal; and

(c) a processor which retrieves updated biological function data for one or more of the biopolymers from a memory based on the read identifier signal,

wherein the processor associates information obtained from reading the array, with the retrieved biological function data and wherein the retrieval of the biological function data by the processor unit includes: retrieving data on the identity of the biopolymers based on the read identifier; and retrieving the biological function data for one or more of the biopolymers from a memory based on the retrieved identity data.

29. **(Original)** An apparatus according to claim 25 additionally comprises a communication module, and wherein the processor retrieves the biological function data from a remote memory by communicating the read identifier or identity data to a remote location and receiving in response the biological function data as a communication.

30. **(Currently amended)** An apparatus for using an addressable array of biopolymers on a substrate, comprising:

(a) an array reader which reads ~~the~~ an array of addressable biopolymer regions to following exposure to a sample;

(b) a reader which reads an identifier carried on an array substrate or an array housing, as an identifier signal;

(c) a communication module; and

(d) a processor adapted to retrieve updated ~~which: retrieves feature~~

characteristic data for the array from a memory based on the read identifier signal, and communicate ~~communicates~~ feature characteristic data for the array to a remote location in association with an identification of the feature;

wherein the feature characteristic data communicated to the remote location comprises an identification of the feature along with an indication of a suspected feature error.

31. (Cancelled)

32. (Currently amended) An apparatus according to claim 30 wherein the processor is adapted to retrieve feature characteristic data ~~communicated feature identification includes the~~ using a signal for said array identifier signal.

33. (Currently amended) An apparatus according to claim 30 wherein the processor is adapted to additionally obtain ~~obtains~~ a communication address for the remote location using the identifier signal and ~~communicates~~ communicate the feature characteristic data to the remote location using the communication address.

34-36 (Cancelled)

37. (Previously presented) A method according to claim 1 wherein the retrieved biological function data comprises information on the gene from which a target or its complement originated.

38. (Previously presented) A method according to claim 37 wherein the biopolymers are polynucleotides.

39. (Previously presented) A method according to claim 1 wherein the retrieved biological function data comprises information on the gene from which a target of the array, or its complement, originated.

40. (Currently amended) ~~A method~~ An apparatus according to claim 30 wherein the processor is adapted to communicate ~~feature characteristic data which~~

~~the processor communicates to the remote location~~ comprises an indication of a suspected feature error to the remote location.

41. **(Currently amended)** ~~A method~~ An apparatus according to claim 40 wherein the processor is adapted to communicate ~~indication of suspected error~~ comprises an indication of one or more of an error in feature dimension, location, presence or amount of biopolymer present at a feature to said remote location.

42. **(Currently amended)** ~~A method~~ An apparatus according to claim 30 wherein the processor is adapted to communicate ~~feature characteristic data which the processor communicates to the remote location~~ comprises updated biological function data for one or more of the biopolymers to said remote location.

43. **(Currently amended)** ~~A method~~ An apparatus according to claim 42 wherein the processor is adapted to communicate ~~biological function data~~ comprises updated information on the function of a target of the array or its complement, or the gene from which either originated.

44. **(Previously presented)** A method according to claim 9 wherein the biopolymers are polynucleotides.

45. **(Currently amended)** ~~A method~~ An apparatus according to claim 25 wherein the biopolymers are polynucleotides.

46. **(New)** A method of using a biopolymeric array, comprising:

- (a) receiving from a remote location a biopolymeric array associated with a machine readable array identifier, wherein said biopolymeric array comprises a plurality of addressable biopolymer regions,
- (b) exposing the array to a sample;
- (c) reading the array and said array identifier to produce data; and
- (d) retrieving biological function information for one or more of the biopolymers by:

- i) using the array identifier to obtain identifiers for the biopolymers present in said regions; and
- ii) using said identifiers for the biopolymers to obtain updated biological function information from a memory.

47. (New) The method of claim 46, wherein said database has been updated with new biological information for at least one biopolymer prior to said retrieving step (d).

48. (New) The method of claim 46, wherein said database also contains indications of suspected feature errors and retrieving step (d) comprises obtaining an indication of a suspected feature error for at least one feature.

49. (New) The method of claim 46 wherein said database is remote from the location at which the array and identifier are read, and wherein said array identifier is communicated to said remote location.

50. (New) The method of claim 46, wherein said database is present on a portable storage medium received from a remote location.

51. (New) The method of claim 46, wherein said machine readable identifier is barcode.

52. (New) The method of claim 19, wherein said biopolymers are polynucleotides.

53. (New) The method of claim 1, wherein said addressable biopolymer regions contain nucleic acids or polypeptides.

54. (New) The method of claim 46, wherein said addressable biopolymer regions contain nucleic acids or polypeptides.

55. (New) The apparatus of claim 25, wherein said addressable biopolymer regions contain nucleic acids or polypeptides.